

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: Aa4xx <aa4xx@nando.net>
Subject: [2088] 40 M Beacon
Message-ID: <Pine.SUN.3.91.960101004423.22459J@parsifal.nando.net>

Hi Gang,

The beacon reports have been most interesting, with many first-timers weighing in for the New Year's session. The following folks have confirmed reception of the Dec 31st beacon at one or more power levels:

KE3IK	Hank	Pocono Lake, NY
KV2X	Tom	Fairport, NY
W4NFR	W.G.	Warrenton, VA
KB8LFQ	Joe	Lansing, MI
VE3DNL	Glen	Hamilton, ONTARIO
WA3NNA	Pete	Newtown Square, PA
W4UKU	Jerry	North Augusta, SC (off the back of the wirebeam!)
N2CX	Joe	Brooklawn, NJ
KA3WTF	Fran	Larksville, PA

The hours will be expanded tomorrow to give serious time for stations in the Western states. Stations from all districts West of the Mississippi are showing good signal strengths around 10 PM EST (0300 Z).

I hope this trend carries over through tomorrow.

Here's the schedule for January 1st:

Frequency 7021.0 KHz

8 AM - 11 AM EST	(1300-1600 Z)	200 microwatts
11 AM - 1 PM EST	(1600-1800 Z)	2 milliwatts
1 PM - 4 PM EST	(1800-2100 Z)	20 milliwatts
4 PM - 11 PM EST	(2100-0400 Z)	Beaming West @ 2,20,200 mW

A hearty thanks to all the enthusiastic listeners out there, and congratulations to all the folks who have copied the beacon this session.
72 es Happy New Year,

Paul, AA4XX

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: WJ4PRandy@aol.com

Subject: [2102] 40 mtr Beacon
Message-ID: <960101182019_103808438@emout05.mail.aol.com>

Hey Gang!

I got the beacon at 2225Z at the 200mw lvl.
Using a Paragon and a horizontal wire and MFJ tuner.
Just above the noise.

Just when I thought I'd never get him...got S7 noise level

HNY, Randy, WJ4P

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: Dean Dowsett <103345.2023@compuserve.com>
Subject: [2107] 40M Beacon
Message-ID: <960102004948_103345.2023_JHL22-1@CompuServe.COM>

Hi All

Just heard the AA4XX beacon here in SW Wisconsin.

Receiver: FT-101EE with cw filter
Antenna: 40M Dipole about 30 feet up.

73's
Dean
KB0BAN QRP-L #283

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: adams@chuck.dallas.sgi.com (chuck adams)
Subject: [2099] 40M Beacon AA4XX/B
Message-ID: <199601012238.WAA24588@chuck.dallas.sgi.com>

Bagged him at 2222Z here in TX. Just above the noise level which is pretty severe here due to cold front coming into the air with rain and forecasted snow. Oooops. Sorry wx forecast alert. :-)

Also someone had hairdryer going across the house, but I called for a timeout just long enough to get the "keyword". Also at 200mW. At 20 wpm with QRN it is still tough copy.

Wow, what a way to start the year.

dit dit es gl to all

--

Chuck Adams (K5FO CP-60) adams@sgi.com
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: JKXM17A@prodigy.com (ALLEN SMITH)
Subject: [2106] AA4XX Beacon heard, sort of.
Message-ID: <091.07728903.JKXM17A@prodigy.com>

Well, I can't say that I actually copied the entire beacon string but I can say for sure that I heard the beacon. I first noticed it barely perceptible at 2319Z, signal strength 219 with only occasional letters distinguishable. "vvv vvv vvv _00_w___ oo(?)_ d_AA4XX/b" In other words I didn't get the output power or the secret code word and therefore no cigar but I am delighted to hear even that little bit.

Occasional letters continued to rise almost imperceptibly above the noise until 2337Z when WR4I questioned the availability of the frequency. I quickly advised "no" and he considerately departed. Then, at 2339Z, W9JVF claimed the frequency and began calling CQ. At 2343Z W9JVF was successful in engaging another station in QSO so I gave up the struggle.

The receiver was a Wilderness NC40A. It was snowing at the time and the noise level high.

Happy New Year and 72 from,

Allen - AA0YU, Grand Junction, CO.

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: K5ERJ@aol.com
Subject: [2104] Beacon Heard
Message-ID: <960101185517_82148604@emout06.mail.aol.com>

AA4XX Beacon heard in So. Central KS at 2259Z. Sig weak with QRM at abt 229. This was at 200 MW level for equivalent 5380 mi. per watt.

Receiver: TS 850 Kenwood with CWF-1 Filter.
Antenna: 80/40 Trap Dipole up 21 feet, orientated NW/SE

Sorta like hunting the fox!

73 es HNY
Ed K5ERJ

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: Aa4xx <aa4xx@nando.net>
Subject: [2101] Durham NC QRP Meeting !!! (fwd)
Message-ID: <Pine.SUN.3.91.960101180505.18971A-100000@parsifal.nando.net>

----- Forwarded message -----
From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: adams@chuck.dallas.sgi.com (chuck adams)
Subject: [2100] Follow up AA4XX/B
Message-ID: <199601012242.WAA24607@chuck.dallas.sgi.com>

This was on an OHR Explorer II with no additional filtering
at all, in fact the Bandwidth was about the 11 o'clock position.

--
Chuck Adams (K5FO CP-60) adams@sgi.com
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: JessQRP@aol.com
Subject: [2092] Gap Titan Antenna
Message-ID: <960101095330_103508087@mail04.mail.aol.com>

Hi all,

Had a chance to pickup a Gap Titan for a good price locally used. I thought that I might be able to get it on the air in time for SKN/QRP, but alas, the SWR's just are not where they are supposed to be. I know that there are a couple of people on the list that have used this antenna and I would like some input, as I will go out and brave the cold to get it tuned today. I initially put it on a 4 foot pipe in the ground with the counterpoise about 1-2 feet off of the ground. Yes I know that they recommend at least 5 feet. This is very temporary. The antenna was partially assembled when I got it home. It appeared from the visual I did on it compared to the diagram that it was assembled and wired right. They talk in the manual about the antenna being resonant on the "preselected" 80 meter band frequency. I see nowhere in

the little manual that comes with the antenna that you can pre-tune or preselect the 80 meter band coverage. I checked the antenna with the trusty RF-1 and it is no where near resonant on 80 meters. The closest it comes is about 8.5-1 SWR around 2.8 MHZ. On 40 meters the SWR is around 6-1 in band and I get a 2.1-1 SWR at about 6.8 MHZ. The only 2 bands that the antenna is resonant on so far is 15 meters and 10 meters. ooops also 12 meters. The SWR on 20 meters is about 4-1 but the antenna is resonant at about 13.5 MHZ.

Sory to ramble. I hope that there is someone else out there that has used one of these that can shed some light to save me experimentation time. I know that I need to get it off of the ground some, but I have a hard time believing that it would cuase it to not be resonant on 80 meters at all if to close to the ground!

Best for the new year, and did get on 40 and 80 last night for SKN after the appointed times, about 4:00 to 5:00 Z and made lots of good QSO's and had fun. Used the 80 meter inverted L and the trusty R7 (which has been sold, the other ham shud pick it up today)

Jess

From qrp-l@lehigh.edu Mon Jan 1 21:15:23 1996
From: WJ4PRandy@aol.com
Subject: [2097] Gap Titan Vertical
Message-ID: <960101115233_81950983@emout06.mail.aol.com>

Hey Jess,

I have been using the Gap Titan for about six months now and I am very pleased with its performance. I live in an area thats not very antenna friendly- in fact, there are covenants!! But, I helped during the latest re-write they recently had and I am "legal" (now!). The rest of that story some other time....

My Titan is installed on a 15 foot pipe that is centered in a batch of trees for camoflage (sp?). The pipe is a couple of those "top pipes" used for chain link fences, one is cemented into the ground and the next one (abt 11') sticks into that. The base of the Titan is guyed for stability there and since it is surrounded by trees there is no room for the "counterpoise". That loop of wire they refer to as the counterpoise is really the "rest" of the 40 mter portion of the antenna. I clamped the wire to the base of the radiating element using the clamp for the "cross bars" and I used that wire as one of the guys. This wire is straight out and down at about a 30 deg angle. The swr at the bottom of 40 is about 3:1 and I have been meaning to lengthen the wire, but it works so well I havent felt the need to mess with it. I used small nylon

rope to guy the antenna abt half way up for more stability and to keep it out of the trees when windy. It really does flail around otherwise. Incidentally, I painted the Titan a dull grey/green to make it less obvious...blends right in!

When I first put it together I set it up about 6 ft above ground and it tuned up as advertised...good swr's at all the right places. And - with no tuning!! I'm not sure what tuning can be done? The "cap unit" tunes the antenna to a preselected freq on 80. You can order the antenna for the section of 80 you want to operate in. I bought an extra cap-unit for the phone section...but its gathering dust on the desk since its not easy to change after the antenna is mounted. The antenna has a very small bandwidth on 80, just a couple of 100khz wide. Swr is 1:1 at 3.6 and is 2:1 at 3.5mHz. They do some really funny stuff to get it to be resonant at 80mtrs...I suspect it is a radiating dummy load! But I seem to get out ok... I am pleased at how well it does on the other bands. In place, in the trees, nothing changed swr wise except for the 40 mter thing I described before.

I would suspect the "cap unit" may be defective. Thats the easiest thing to check and I think the cap is in the circuit on all bands. The "manual" leaves a lot to be desired, but the factory was very helpful on the phone. I would double check that the tuner rods are on the correct standoffs. I would assume nothing and start from scratch on those.

I guess I havent been much help except to show you a "success story" to give you hope. I have found it to be a great antenna.

HNY and 73,

Randy WJ4P

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: JKXM17A@prodigy.com (ALLEN SMITH)
Subject: [2098] Iambic A or B
Message-ID: <091.07706571.JKXM17A@prodigy.com>

In response to a recently posting concerning confusion about the two keying methods known as "iambic A" or "iambic B" I offer the following for consideration:

Check your ARRL handbook, if you have one. My '93 handbook includes an explanation of "plain vanilla" keying vs "B" keying. The iambic "A or B" modes refer to what happens when the operator squeezes both paddles together at the same time. In iambic "B" the keyer completes the alternate element after the paddles are released. In iambic "A" the keyer does not

complete the alternating element when the paddles are released. Thus Tony Drumm's observation that he produced a "k" instead of a "c" in iambic mode "A" when he attempted to squeeze out a "CQ" on his keyer. That's just what it should have done.

Personally, I prefer mode "A" due to my personal style of attacking my Vibroplex iambic paddles rather than squeezing them. (Does that make any sense to anyone besides me?)

72, Allen - AA0YU, Grand Junction, CO. (formerly "Bellyache Flats."

From qrp-l@lehigh.edu Mon Jan 1 21:15:23 1996
From: rwright@soml.com (Robert Wright)
Subject: [2087] Icom 706
Message-ID: <199601010550.VAA06030@sonic.net>

New Year's Eve:

Was wondering if anyone else on the circuit is starting the New Year with an Icom 706? I have been using the little beastie at 5 watts out today and aside from fan noise, and clicking relay noise with full breakin, am enjoying its 1 hertz readout, band scan scope, 6 & 2 mtr all mode coverage and ease of use.

72/73 Bob WB7CNJ - Norcal #201, QRP-L #333.

>A taxpayer is someone who does not have to take a civil service exam in order to work for the government. - Krueger's Observation

Robert Wright
rwright@soml.com

From qrp-l@lehigh.edu Mon Jan 1 21:15:23 1996
From: AlexQRP@aol.com
Subject: [2084] Solar Power
Message-ID: <951231223302_28497002@mail02.mail.aol.com>

anyone know of a few good reliable sources for charge controllers and solar panels?
something I'd like to get accomplished in 96 is to rid myself of the power

company and operate solely with solar pwer. Also is an RV deep cycle battery a good choice or are there other battery options? Thanks in advance Alex WA5UNY

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: Wynn C C <wyn@stc06.ctd.ornl.gov>
Subject: [2093] Straight Key Night
Message-ID: <Pine.OSF.3.91.960101101817.7213A-100000@stc06.ctd.ornl.gov>

Thanks to the Chuckmeister for the inspiration to try straight key night. Now I think I have the solution for Fox overspeed on the Novice Channels. Just have the foxes use straight keys. I tried to hang in there at 20 wpm last night but think I developed carpal tunnel synddrome, ouch!

72/73,
Clay N4AOX
wyn@ornl.gov

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: bfinch@asp.vet.purdue.edu (Robert Finch)
Subject: [2096] tnxs
Message-ID: <9601011739.AA05120@asp.vet.purdue.edu>

tnxs fer all the fun here this past year....and the education.....
happy new year from sunny and warm biscayne bay and the orange bowl.....
baab,n6cxb

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: Ptcandy@aol.com
Subject: [2103] TVI solution in an apartment complex
Message-ID: <960101182444_82133233@mail02.mail.aol.com>

Since I lost the address to the poor soul who has a TVI problem in an apartment complex, I am directing my response to the group in hopes that it will reach him indirectly.
The solution is easy and does not require any technical knowledge. I first learned of this technique from Norm K2YEW, the founder and president for life

of the Long Island QRP heavy hitters group. During Norm's QRO days, he operated out of his apartment and as you can imagine, created quite a stir among TV watchers.

The first rule is NEVER admit being a ham. When the interference was discussed among apartment residents, ole Norm would be just as angry as everyone else. He volunteered to head the committee to find the sonofabitch and run him out of town! Needless to say, Norm continued to operate and his neighbors never knew. Actually, when the interference stopped the day he moved out, some of them figured it out but were too embarrassed to admit they have been had!

I suppose the right thing to do is go by the book and be a good guy but in many situations, whatever you do is not enough. In fact, I am blamed for much of the intererence that goes on around here even though I am not at home when it occurs. Some neighbors see the big antenna and assume that I am the cause of their problems because their uncle Cosmo said so and he must know because he knows something about electricity.

Since it is New Years Day, I gotta go to Coney Island, strip down to my underwear and romp in the surf with the Polar Bear Club.

Happy New Year
DE N2KPY Peter

From qrp-l@lehigh.edu Mon Jan 1 21:15:23 1996
From: wayneb@on-ramp.ior.com (wayne barnhart)
Subject: [2089] twinlead vertical
Message-ID: <m0tWeoc-000RuVC@on-ramp.ior.com>

does anyone on the list have experience with the 'twinlead vertical' ?

basically it's 33.25 feet of 300 ohm twinlead, shorted at the 'end', fed with 50 ohm coax. the author claims low VSWR and aprox 40-50 ohm Z.

your help, advice, experience would be appreciated.

ng@n. frank.

did you put some radials on it?

I once made a 5/8 wave on 20M from the big stuff 400 or 450 ohm. Shorting out both ends made it a real wide band vertical. hung it from a tree and stuck a couple radials on the thing and it worked just fine. Until the wind blew it down.

Put the darn thing up during too nice a day. That could be your whole problem. Was the sun shining when you made the antenna? :)

Also made a J-pole for 2 mtrs from 300 ohm twinlead. Worked just fine. Think that was the day we had the hail storm...

Wayne Barnhart WB7WHI
Spokane, Wa.

Dirt is good!

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: adams@chuck.dallas.sgi.com (chuck adams)
Subject: [2090] Re: 40 M Beacon
Message-ID: <199601011415.0AA21399@chuck.dallas.sgi.com>

Paul et.al.,

Would you get everyone to post their antenna and receiver setup?
And maybe just a quick note on relative noise levels at their QTH.

This information will give us all some valuable information in the process of the tests.

dit dit es gl

--

Chuck Adams (K5FO CP-60) adams@sgi.com
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: rossi@VFL.Paramax.COM (Pete Rossi)
Subject: [2105] Re: 40 meter Beacon
Message-ID: <9601020001.AA20810@gvlf6-a>

Here is my AA4XX QRP BEACON REPORT

31 dec 95 1802z 2mw HOPE S3-4 peaking S6 at times. Continued to
copy until after 1900z when I shut down.

31 dec 95 2041z 20mw BLUE S4-5 peaking S7 at times

31 dec 95 2050z 200mw D00R S7-8 peaking at S9 a few times

01 jan 96 1749z 20mw PLAY S4-5 - good signal until 1930z

RX : Drake 2B + 2BQ (Also copied OK on Heath SB-301)

ANT : 40 meter inverted vee. Center @ 60' ends @ 40' running N/S
LOCATION : about 15 miles west of Philadelphia PA FM29hx

These were the only times I tried listening.

Pete Rossi - WA3NNA
rossi@vfl.paramax.com
Loral Defense Systems-Eagan (formerly Unisys Government Systems Group)
Valley Forge Engineering Center - Paoli, Pennsylvania

From qrp-l@lehigh.edu Mon Jan 1 21:15:23 1996
From: Duncan MacDonald <macdonad@cuug.ab.ca>
Subject: [2109] Re: correction on JIM CATES address
Message-ID: <Pine.OSF.3.91.960101190631.28466A-100000@dec3300>

x???=B5Hello Robert and fellow QRPers Your Information is correct.
JW Cates Zip code is 95821
Happy New Year to All

Duncan MacDonald, VE6DMD
macdonad@cuug.ab.ca

QRP is getting the most from the least!!

On Sat, 30 Dec 1995, Robert Marlan wrote:

> My computer beeped at me...
>=20
> I believe the correct zip code for Jim Cates is
> 95821 *not* 95841, as listed in the St. Louis Announcement,
> and in Chuck's reprint of it on the mailing list. If my information
> is incorrect please let me and the list know!
>=20
> Thanks
>=20
> Bob Marlan KA6NOC/7
> rsm@halcyon.com
>=20
>=20
>=20
>=20

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: David Johnson <djohnson@acpub.duke.edu>
Subject: Durham NC QRP Meeting !!!

=====

Announcing another fun, informal gathering of Triangle Area QRPers!
All persons interested in low-power amateur radio communications
are invited and encouraged to attend! Please spread the news about
this meeting!

Time: 7:00 pm
From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: stan@cruzio.com
Subject: [2085] RE: NC40 Output Filter

On Fri, 15 Dec 95 17:40:59 EST Walter.Thomas@ccmail.gsfc.nasa.gov wrote:

>Mike/WA8MCQ measured the output of my NC40A on a spectrum analyzer he has
access
>to and it checked out fine with 2F being about 38 dB down
>with the original capacitors: 330, 820, 330 pF. Mike also had run some
computer
>simulations of this and other LP output filters and if I remember
correctly
>changing the center cap to 680 pF
>*degraded* the attenuation vs. freq. curve.

>
>Replacing the 820 with the 680 pF may have been some of the cause for
>decreased attenuation at 2F.

>The *permability* of powdered iron toroids is typically spec'd at +/- 5
per
>cent. When the AL value is factored in, I know one can expect inductance
>differences of at least 10%. Winding techniques also affects inductance.
>Mike (MCQ) reported a 24% variation [these results have been published in
ARCI

>_QQ_]. The toroids need to have the correct inductance to get the proper filter
>performance. (I'm grateful that NorCal/Wayne published the reference values for
>the inductances in their manuals; Some kits with prewound toroids don't furnish this info.)
>
>Also, I remember reading somewhere that the calculated inductances using the
>formula's from (Amidon) seem to give lower values than what is actually measured, which would confirm your results.
>
>Guess the way to go is to wind them and measure them so we end up with the expected response. (I sometimes go to extremes; I've matched the capacitors in
>the NorCal crystal filters I've constructed, & matched the AGC FETs and diodes
>in the latest one I'm now finishing up.)
>
>If I can see Mike, maybe we can change out the 820 for a 680 and compare the
>spectrum analyses for this same rig (that he's measured already).
>

Hi Walt , thanks for the info..

first .. I was * told * by w6cyx that changing the center cap value wud in fact make an improvement to the 2f harmonic. I never asked him if he tested it, I just took his word for it since he is an engineer and I'm a cpa. I did make a few other minor mods that seemed to get me a tenth here and a tenth there, plus , I was using about 14 volts to power the rig so I suspect the cumulative effect of what I had done was causing the 2f to be only 27-28 db neg. The increased power I was getting out (I have since learned) caused the output impedance to be closer to 12 ohms rather than the designed 50.

As I stated I measured the toroids to be closer to 2 uh than the 1.3 they were supposed to be. I dont recall seeing what values the toroids were supposed to be, I used the chart in the QRPp that was provided by Mike C. to find what they were supposed to be.

As someone who posted a reply to my original article reminded me , I forgot to measure the inductance of the test leads , but that value was only about .25 uh which still left me at 1.7uh about 30 % too high.

I received a reply from Doug, KI6DS saying that they had in fact received a batch of toroids that were out of spec.

I found that by reducing L7 by 1 turn , I got to the full 30 db down on 2f, 3f was still way down AND the output power went up almost a full watt.

I played around removing and adding additional turns to L7 and L8 and found it could possibly be improved more, but I didnt have access at the time to Erics' spectrum analyzer , so I just left it at that , since I now have to crank the power down a bit to keep it under 5 watts anyway.

I measured the harmonic output on wa6hhq's spectrum analyzer so I'm not just guessing.

Wa6hhq measured his toroids and found them to be close to spec but removed a turn on L7 to see what would happen and he also picked up almost a watt out, his output harmonics were unchanged at neg 30 db for 2f.

I would be interested to see your results if you swap the center inductor to the 680 or so value , and then further if you remove 1 turn from L7.

72/3 Stan , N6ulu

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: "'AB7HI' Stephen Lee" <slee@u.washington.edu>
Subject: [2086] Re: Solar Power
Message-ID: <Pine.A32.3.91j.951231210859.38739A-100000@homer23.u.washington.edu>

If you have web access there is a web page at:
<http://nyquist.ee.ualberta.ca/~schmaus/dcbat.html>
I repeat: <http://nyquist.ee.ualberta.ca/~schmaus/dcbat.html>

Information is available there on a company in Canada that offers solar battery chargers from the simple to the sublime; RV to whole house. I was just browsing their site this weekend.
Try sending mail to: nova@sentex.net
The company's name is NOVA and their phone number is (604) 765-9020.
Ask for Harrold Lunner. Their 1.4 amp model, for maintaining a charge on the battery, is \$330(CA?) while their 3.0 amp model is \$600(CA?).
Enjoy!

Stephen Lee, AB7HI
slee@u.washington.edu

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: Byron8LCZ@aol.com
Subject: [2094] Re: Solar Power
Message-ID: <960101102512_28692279@mail04.mail.aol.com>

Hi Steven,

Thanks for the Web page info.

Those prices seem pretty high, must be Canadian dollars. A 16 vdc 4.4 amp panel should be in the 450 dollar ball park, charger/regulators should be between 40 and 50 dollars. I buy my solar equipment from Atlantic Solar in Baltimore, Md 301-686-2500, they are the only solar manufacturers/distributors that have a booth inside and outside at Dayton every year.

They have a terrific catalog too. Everything from solar panels to batteries, inverters, wind energy, water energy, charge controllers/regulators, gasoline powered generators, evaporative coolers, lighting, appliances that run on low voltage dc, books. a fairly complete one stop shopping center for alternative energy sources. their panels range from very small (hand held size) to complete home energy systems. Plus charts on sizing panels, batteries and lots of other good info.

I have a pair of their 1 ft sq panels that put out 14.5 vdc at 280 ma, they were 40 dollars each at Dayton 95. the edge of the panels have a grooved channel for mounting and to keep the panel rigid. Its first class. I also have their charge controller, its about 2 inches square, has 4 LED's to show charge conditions and is water tight, great for outdoors use. it was 44 dollars.

Generally the smaller and less expensive panels are Amorphous Silicon and the larger more expensive panels are crystalline silicon wafers. You can also get regulators sized for 13.2 vdc RV batteries or 12 volt gell cell batteries.

72, Byron WA8LCZ Detroit

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: cebik@UTKVVX.UTCC.UTK.EDU
Subject: [2091] Re: St. Louis Tuner Kit
Message-ID: <Pine.PMDF.3.91.960101090457.541070932E-100000@utkvx.utk.edu>

On Sun, 31 Dec 1995, NONE wrote:
> Some hard criteria by which to evaluate tuners.

- >
- > 1. Does the St. Louis tuner design have a plexiglas case or wide spacing from metal?
 - > 2. Does the St. Louis tuner use #16 or larger silver plated wire?
 - > 3. Does the St. Louis tuner have a variable inductor?
 - > 4. Does the St. Louis tuner design use a Pi-Net config.?
 - > 5. Does the St. Louis design sustain component Q throughout?
 - > 6. Will the St. Louis design stop unattenuated harmonics that otherwise are "received" by VCR's, televisions and stereos from many QRPers?
 - > 7. How does the "delta" compare on the St. Louis Tuner design?

In my view, these are very desirable features of any tuner, but "hard" may be too strong a word, since circumstances dictate often that we design within other constraints. The auto-ATU in my HF rig meets few of these criteria, but does well enough at its task to use on occasion.

Before discounting the St. Louis tuner (not yet seen here since QRPP has not arrived), consider its features that go along with the basic network function. C-L-Cs and L-C-Ls can be quite efficient if you understand where their weaknesses lie and take precautions not to fall into their weaknesses. For example, do not rely on a C-L-C for harmonic reduction. The 2-element L network is among the most efficient of networks, but it, too, has limitations, like needing reversal if the impedance presented goes from lower to higher than the source.

It is one thing to discuss the relative merits of networks and quite another to evaluate a complete package. Moreover, hams have operated well with many of the networks that others might not prefer, either from experienced problems or from fundamental considerations. Would I accept an extra percent or 2 of power loss in a network if I gained a bunch of operating conveniences, handling ease, and the like. Very likely, I would, but not necessarily in every case. For the choice also depends on what an individual is trying to accomplish.

Hence, please tread lightly on so-called "hard" criteria: the list is neither complete nor perhaps nearly as hard as impressions may give. The list in question, stemming from an article on one of many relevant basic ideas in ATU design, is something to think about, but by no means the only thing to think about. Nor would every ATU user or designer place equal weight on each of the elements in the list as they design and/or build with specific functions and goals in mind.

Someone could write a book on what there is to think about in ATUs--perhaps one of these days, someone should. But all communications thinking must be goal-specification-function oriented, never absolute. ATUs offer possibilities, and the only hard limits occur when we try to make them do what they simply cannot due. But between "cannot do" and "optimum" there is a vast territory for design decision.

-73-
LB, W4RNL

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: PaulKB8N@aol.com
Subject: [2095] Re: St. Louis Tuner Kit
Message-ID: <960101105021_81930899@mail02.mail.aol.com>

To All:

LB once again really put things in perspective. Every ATU design involves some compromises. My post was not meant as a flame against the St. Louis tuner, but rather was a warning flag that, unless a tuner design is modelled and tested in a similar manner described in LB's January QQ article, the user will not know where the strengths and weaknesses of that tuner design are.

This lack of knowledge can be at the expense of many hours attempting to make contacts, while, in fact, most of the power is not going to the antenna, but rather to warm up the internal components of the tuner. The challenge with many new tuner designs is that they are extremely difficult to model. When you start involving ferrite cores in the inductor, that can introduce a whole new set of variables that can exacerbate the modelling process.

Virtually every type of component used in an ATU has some limitations.

Rotary inductors are great in that you can adjust them for the minimum inductance necessary to achieve a match, a critical factor in series-inductance ATU design efficiency. Rotary inductors contain four sets of moving contacts (wipers at the ends of the coil, the contact between the roller and the coil, and the contact between the roller and the shorting bar.

If one or more of those contacts presents a high resistance, due to dirt or corrosion, you lose efficiency. Likewise, a switched inductor contains essentially the same number of contacts, but only the tap contact on the coil is variable, the rest are stationary. With the tapped versus rotary inductor, you trade less-than-optimal inductance for reduced odds of failure of the dynamic contacts on a rotary inductor. Is the compromise worth it?

Again, an overbuilt, Hi-Q tapped inductor can overcome these disadvantages.

How far are you willing to go to achieve efficiency? A 2 inch diameter, 6 tpi air-wound inductor made of #12 wire will provide excellent Q and will perform at high efficiency levels in a Pi-Net design. Are you willing to build a tuner around such a large component?

Each antenna situation presents its own set of variables than places demands on a potential ATU. You cannot make hard and fast rules regarding all ATU designs (i. e. it must have X guage wire, it must be a Pi-Net, etc). What is important is that there is a level of knowledge and understanding about the

strengths and weaknesses of various designs. Of equal importance is the need to model and test new designs against a set of common standards.

Again, I compliment LB on his article and follow-on comments. We're sitting in the same choir loft...I hope the "preaching" is reaching the rest of the congregation.

73, Paul, KB8N

From qrp-1@lehigh.edu Mon Jan 1 21:15:23 1996
From: JCoote@aol.com
Subject: [2108] Re: twinlead vertical
Message-ID: <960101195720_103875589@mail06.mail.aol.com>

In a message dated 96-01-01 02:40:58 EST, wayneb@on-ramp.ior.com (wayne barnhart) writes:

>)
>
>does anyone on the list have experience with the 'twinlead vertical' ?
>
>basically it's 33.25 feet of 300 ohm twinlead, shorted at the 'end', fed
>with 50 ohm coax. the author claims low VSWR and aprox 40-50 ohm Z.
>
>your help, advice, experience would be appreciated.
>
>ng0n. frank.

This isn't much help but I also saw a vertical (or horizontal) wire design made from a good quality 300 ohm TV line. The interesting thing is that it was closed like a folded dipole only the feed was 50 ohm coax. The feed was not in the middle which is a 300 ohm impedance but off-center where the feed impedance was close to 50 ohms. I'm not sure about the length of the antenna or the location of the 50-ohm feedpoint.

73, Jay
WB6AAM